

ABSTRACT OF THE DISCLOSURE

5 The TCP receiver's advertised window (i.e., the
receive buffer of a TCP connection) limits the maximum
window and consequently the throughput that can be
10 achieved by the sender. Thus, the idea behind TCP rate
control is to match the offered network load to the
available resources by modifying at an intermediate
network device, the receiver's advertised window in TCP
acknowledgments returning to the sources. In this
15 disclosure, we propose a new TCP rate control scheme for
a shared buffer where the buffer is logically organized
into multiple queues. In the scheme, dynamic buffer
thresholds are used to ensure efficient and fair usage of
buffer memory among the queues. Conventional schemes
15 allocate buffer space to each queue through the use of
static buffer thresholds. This can result in unnecessary
packet drops which leads to poor network performance
since congested or heavily loaded queues cannot gain
access to buffers not utilized by lightly loaded queues.